REMARKS/ARGUMENTS

Claims 1, 3-4, 7-12, 14-29, and 36-39 are pending in this application. Claims 3, 4, 9-12, 14, 16, and 36-39 are amended. Claims 2, 13, and 30-33 are cancelled without prejudice or disclaimer.

Examiner has acknowledged that claims 1, 3-4, 15, 17, 19, 21, 23, 25, and 27 are directed to allowable subject matter and that claim 8 would be allowable if rewritten in independent form including all of the limitations of the base claim.

Claims 3 and 4 are amended to remove the term "consisting" from the claims. Claim 3 is broadened to include the nucleotide sequence of nucleotides 1-1532 or nucleotides 1533-4700 of SEQ ID NO:2. Claims 8-9 are amended to depend from claim 3; claim 9 is amended to conform with the scope of the original claim 3.

Claims 10, 12, and 14 are amended to depend from claim 11, which is amended to recite a Markush group of their three nucleotide sequences.

Claim 16 has been amended to replace the phrase "which comprises" with --comprising--, and has been made dependent from claim 7.

Claims 36-39 have been amended to define the nucleotide sequence that may be used to differentiate between EpEP and epep plants. Support for this amendment can be found on page 33 line 10 to page 34 line 4 as well as with reference to Figure 1, which indicates the primers used, and Figure 5, which specifies the region for differentiation between EpEp and epep genotypes.

Rejection under 35 U.S.C. 112

Claims 32 and 36-39 were rejected under 35 U.S.C. 112, first paragraph, as the Examiner alleged that they fail to comply with the written description requirement. Applicant traverses.

With respect to claim 32, Examiner indicates that the application fails to provide support for isolated DNA molecules as short as 20 contiguous nucleotides having transcriptional regulatory activity. While Applicant notes that support is provided in the specification at page 5 lines 10-21, page 13 lines 13-16, and page 33 line 13 to page 34 line 12, claim 32 has been cancelled without prejudice or disclaimer.

Applicant respectfully traverses the Examiner's rejection of claim 36. A method to distinguish between EpEp and epep plants is disclosed in Example 3 at pages 33-34 of the specification.

As a result of cancelling claim 32, Applicant has amended claim 36 to recite sequences that may be used to distinguish between the two genotypes. The use of sequences to distinguish between the two genotypes is discussed in the specification at page 33 line 10 to page 34 line 4. Primer prx9+ is a nucleotide sequence comprising the 19 nucleotides ATGCATGCAGGTTTTT-CAG (also see page 28 lines 1-5) and is an example of a sequence that may be used to determine whether or not an 87 base pair sequence is present or absent within a sample. The use of this sequence (prx9+) to identify Ep and ep genotypes is exemplified in Figure 6 and is described in the specification at page 22 lines 4-20. Applicant submits that one of skill in the art may use any sequence within the 87 base pair region identified (i.e. nucleotides 1524-1610 of SEQ ID NO:2) to differentiate the EpEp and epep genotypes. For example, the use of a cDNA to distinguish these geneotypes is exemplified in Example 4, see especially Figure 9. Claims 37-39 have also been amended in a similar manner as that of claim 36 as described above.

Applicant requests withdrawal of the written description rejections.

Rejection under 35 U.S.C. 112

Claims 2, 7, 9-14, 16, 18, 20, 22, 24, 26, 28-33 and 36-39 were rejected under 35 U.S.C. 112, first paragraph, as the Examiner alleged that the specification does not enable any person skilled in the art to make/use the invention commensurate in scope with the claims. Applicant respectfully traverses for the reasons set forth below.

Examiner's rejection arises from the amendment that added the limitation that nucleotide sequences have transcriptional regulatory activity, and discussed the rejected claims with reference to claim 2. Examiner contends that doubt is cast on the predictability that any and all 24 contiguous nucleotide segments (as claimed in claim 2) would have transcriptional regulatory activity. The requirement of having transcriptional regulatory activity was added as a limitation to the claims. The claims in question do not predict that any DNA molecule defined in the claims will have transcriptional regulatory activity, but rather limit the DNA molecules to those that do show such activity. Therefore, Applicant submits that the limitation requiring "transcriptional regulatory activity" narrows the scope of the claims to include sequences that exhibit the utility disclosed within the present application as indicated, for example, in the specification at page 13 lines 9-12, page 13 line 18 to page 14 line 17, page 20 lines 1-10, page 20 line 17 to page 21 line3, and Example 4 at page 35.

Applicant further disputes Examiner's allegation that only two upstream regulatory regions (TATA box and cap signal) are disclosed in the specification, but no others. Applicant submits that the specification at page 19 lines 17-19, teaches that "features of the upstream regulatory region of the genomic DNA include a TATA box . . . a cap region . . ." (emphasis added). It is maintained that the specification leaves open the possibility of other features being included in the upstream regulatory region. Other types of DNA regulatory regions are described in the specification at pages 13-14, including both constitutive and inducible promoters (e.g. page 13 line 18 to page 14 line17), enhancers (e.g. page 15 lines 13-22), as well as methods for determining transcriptional regulatory activity (e.g. page 21 lines 4-12). Furthermore, the specification at page 13 lines 2-3 specifies that the invention is directed to a novel

oligonucleotide sequence encoding a seed coat peroxidase and associated regulatory regions. For these reasons, Applicant submits that it would have been clear to a person of skill in the art that the invention is directed to regulatory elements of SEQ ID NO:2, in addition to the TATA box and cap signal, provided that the sequence exhibits transcriptional regulatory activity.

Without conceding the correctness of Examiner's rejection, and strictly to expedite the prosecution of this application, Applicant has cancelled the subject matter of claims 2, 9, 11, 13, and 30-33 without prejudice or disclaimer, rendering this rejection moot. Applicant reserves the right to reinstate this subject matter during prosecution. Applicant has also amended claims 10, 12, and 14 to depend from claim 11 (as amended), and claim 16 has been amended to depend from claim 7, which is retained.

Claim 7 is directed to an isolated DNA molecule comprising a nucleotide sequence that hybridizes to nucleotides 1-1532 of SEQ ID NO:2 or a complement thereof, provided that the DNA molecule exhibits transcriptional regulatory activity. Support for this claim may be found, for example, in the specification at page 25 line 21 to page 26 line 4, and page 27 lines 1-3. Applicant submits that it would be well within the sphere of a person of skill in the art to identify a DNA molecule that hybridizes to nucleotides 1-1532 of SEQ ID NO:2 or its complement, providing that the DNA molecule has transcriptional regulatory activity, given the conditions defined in claim 7 and the methods disclosed within the specification. Further, claims of a scope similar to that of claim 7, supported by a specification containing a similar written description and enabling disclosure, are routinely allowed by the Patent and Trademark Office.

Applicant requests withdrawal of the enablement rejections.

Potential Interference

The Examiner indicated that an interference proceeding may be initiated against US 6,586,583, if at least one of claims 2, 7, 16, 18, 20, 22, 24, 26 and 28-31 was considered

allowable. Applicant submits that claim 7, and dependent claims 16, 18, 20, 22, 24, 26 and 28, 29 and 31 are allowable and requests that an interference proceeding be initiated.

It is respectfully submitted that the above-identified application is now in a condition for allowance, therefore favourable reconsideration and prompt allowance of these claims are respectfully requested. Should the Examiner believe that anything further is desirable in order to place the application in better condition for allowance, the Examiner is invited to contact the Applicant's undersigned attorney at the telephone number listed below.

Respectfully submitted

By _____
Gary Tanigawa, Reg. No. 43180

901 North Glebe Road, 11th Floor
Arlington, VA 22203-1808
Telephone: (703) 816-4000
Facsimile: (703) 816-4100